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Sharks have long been regarded as the bad boys of the ocean due to their reputation of being fierce man eaters. On rare occasions they've been responsible for human fatalities but they aren't the most dangerous marine animal on this planet. Box jellyfish can kill in a few minutes, inflicting pain so intense that the victim dies of heart failure. Sea snakes possess venom as deadly as any land snake, as do blue-ringed octopus or various cone shells.

For nervous individuals, avoiding those apparent threats is simple: just stay out of the water and get your kicks from parachuting or crossing the road during rush hour. But even staying dry will not work with a croc. The salt water or estuarine Indo-Pacific crocodile *Crocodylus porosus*, the largest predatory reptile on earth, will climb out of the water and could drag you to a watery grave. OK, that's a bit over the top, but in essence it's true. Crocodiles are amphibious and have killed both swimmers and land lubbers in salt and fresh water environments, sometimes far inland.

But to simply label crocodiles as 'man' or 'people eaters' fails to address their complex biology and natural history. Like any imagined threat, the truth is far more fascinating and intricate. Let's give one a poke and see what makes these majestic predators tick.

I first photographed crocodiles in northern Australia, a two metre (6 foot) female in a freshwater river just above the upper tidal mark of the nearby ocean. One thing I'd gleaned from researchers and rangers was that crocs are territorial with the largest animal winning the biggest and best territory, so initially I chose subjects smaller than myself, hoping they'd defer to my larger size. Other divers have successfully photographed small crocs because they're 'programmed' to survive by not attacking a larger competitor – so the theory goes. I was only about 60 mm longer than my first subject and very nervous during the entire session – perhaps because someone had been attacked in one of the nearby pools a week before! It defied my every basic instinct to slip into the murky river and swim towards a large, cold blooded and indiscriminate predator. Very character building.

When diving with sharks or other marine predators an experienced diver can pick up on the animal's body language to determine if its safe to remain in the area. Threat displays, particularly among grey



knee deep in crocodiles



reef sharks *Carcharhinus amblyrhynchos* have been well documented and are clear indicators to an individual's temperament. Great whites, tiger sharks and grey nurse *Carcharias taurus* plus many other species also may charge, twitch or 'jaw chomp' according to mood. Crocodiles, however, usually give no warning of their intention until they act. They may be asleep, afraid, nervous, or ready to attack either drive you off or eat you. There's no way of knowing what's going through their walnut-sized brain until they act with blinding speed – photographing crocodiles underwater is fraught with danger and 'interesting'.

My second attempt was in Papua New Guinea where an ex-pat diver organized a very small juvenile from a croc farm to be released over a coral reef. It was productive but very unsatisfying, not unlike taking photos of tigers in a zoo. So with the help of a friend in Port Moresby I set out to photograph 'real' crocs in a remote area in Milne Bay.

Papua New Guinea has abundant rivers. The rugged mountain interior traps rain clouds lumbering in from the open ocean and send their contents back down to the sea. Huge inland swamps also form, ideal for crocodiles to breed and feed, but when they get crowded weaker crocs of all sizes are forced out into the rivers. When the space there is used up, territorial disputes force the losers out of the river systems into

The huge inland swamps in Papua New Guinea are ideal for crocodiles to breed and feed, but if overcrowding occurs less dominant crocs of all sizes are forced out into the river systems. When space becomes an issue, territorial disputes force the losers out into the coastal areas with less crowded estuaries and rivers.

Facing page: Saltwater crocodiles use their bodies and tails in a sideways motion to swim, they need to surface to breathe, but can walk or run on the seabed once submerged.



coastal areas where they seek out less crowded estuaries and rivers.

I wanted to find these 'transient' crocs in relatively clear coastal water (the rivers are usually like thin gravy) and get into the water with them. A lot of time, energy, patience, anti-itch cream, crotch-rot powder, caffeine and malarial prophylactics were thrown at the project in the humidity of coastal Milne Bay before Mike and I found our first suitable subject. It would have been near impossible without the invaluable help of local guides who knew the area.

When we hesitantly (to say the least) slipped over the side of our small boat and swam towards our first croc, the three local guides rolled their eyes and tutted through their teeth. Their firsthand experience with wild crocs had taught them that being near a croc on land was real and imminent danger, to be in the water with one invited disaster – but to actively seek them out while swimming was suicidal. A long and regular village history of attacks ranging from near-misses to fatal encounters had them genuinely concerned about our safety and mental stability.

Swimming into the general area where the croc had been spotted we spread out to comb the reef flat which was covered in coral clumps and patches of tattered weed. Viz was, relatively speaking, a massive four to six metres. Depth varied from the piercingly bright white sandy shore to 20 metres and more on the seaward side of the reef, but averaged around four metres. Mike's trumpeting through his snorkel like a flatulent elephant signalled the discovery of our toothy subject. Lying among the short weed, the two metre critter looked like a water-logged tree trunk. Its eyes with those goat-like slits were open and, though they didn't follow our cautious circlings, we knew with absolute certainty it was watching our every move.

Taking a breath I dived and approached from directly in front. Crocs usually

attack prey underwater by swinging their head to the side with a rapid slash, so front or rear approaches were 'safest'. Using the rough seabed I cautiously dragged myself along the reef flat until I was within a metre of it. Not a muscle moved. I was sure it was made of concrete. Pushing a tad closer I began to shoot, strobes and clicking camera having no more effect than the small fish that pecked at the croc's skin. The poker stare didn't alter for even a fraction of a second. After about a minute I pushed back for a breath and let Mike have a try, flooded with a mix of relief and awe at the intimate contact.

For the next 15 minutes the croc remained frozen. Then, as we both watched from the surface, it pushed up with its clawed front feet and swam, turning away from us, with a sinuous hippy sway towards the surface. When its nostrils cleared the surface it relaxed, legs and tail hanging down as it took a series of breaths. Raising my head above the surface I could see it watching me with its yellow slitted eyes. Swimming in towards it, it dropped open its jaws showing an array of impressive teeth and hissed at me like a

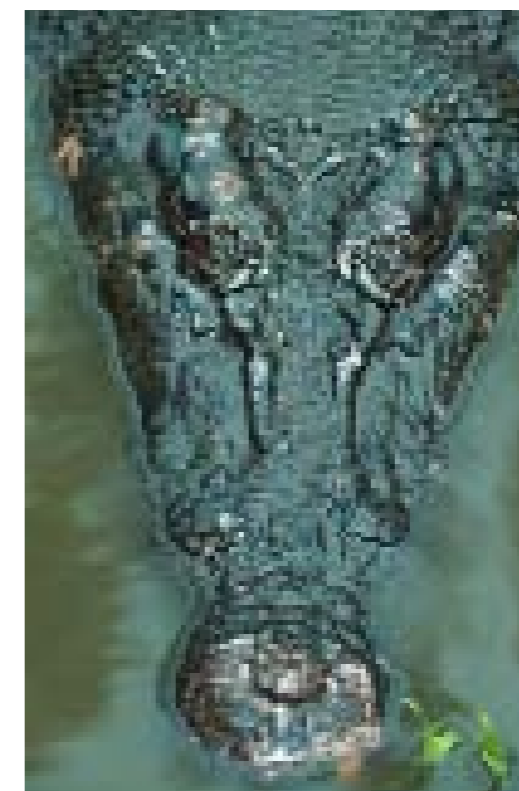
CROCODILES USUALLY ATTACK THEIR PREY UNDERWATER BY SWINGING THEIR HEAD TO THE SIDE WITH A RAPID SLASH, SO FRONT OR REAR APPROACHES WERE THE 'SAFEST'. USING THE ROUGH SEABED I SLOWLY AND CAUTIOUSLY DRAGGED MYSELF ALONG THE REEF FLAT UNTIL I WAS WITHIN A METRE OF IT.

snake. I backed off. The croc kept hanging at the surface, watching our every move and taking an occasional breath through its nostrils.

Without fuss it slid its protective 'goggles' across its eyes and dropped back down below the surface towards the seabed with that classic hippy swimming motion. Reaching the bottom it dropped its hind legs and began to run across the seabed looking for all the world like a dinosaur out of a Hollywood movie. Finding a spot to its liking the croc glided to a halt, using the smaller front legs to brake and prop.

I call the croc an 'it' because the only way to check the sex of a crocodile is to put a finger up its vent and feel for a penis or the lack of one. I didn't try that process with this particular individual partly because I'd feel uncomfortable fumbling for a penis up its bum and also because, whether male or female, it may not appreciate my curiosity.

For about two hours Mike and I followed the croc, shooting when we could. At no time did we feel in danger, though there was some anxious backpeddling when it propped on a porites coral mound at the surface and the current





pushed me a little too close. We avoided harassing it too much because though these animals can be ferocious predators they're also sensitive to stress – professional farmers and handlers know that even a large croc can die very quickly if subjected to excessive stress.

With the afternoon advancing and the tide dropping, the vis became very milky, streaked with light and sprinkled with crud from the reef flat. The croc began to dive deeper as we drifted off the shallows into the deeper edges of the triangular reef. With each successive dive it became harder to find as we had to dive to 10 metres or more before we could see the bottom and our subject. Eventually we lost it all together.

After about five hours in the blood-warm water we were hot, soggy and ready to quit. Heading back up the coast we slumped towel wrapped and exhausted in the bottom of the boat, oblivious to our scattered camera gear as we watched the small wake of our speeding banana boat spread across the mirror calm behind us, bending then breaking the reflected colours of the sunset. Our guides would stretch out their news of the day during the evening village fireside conference. Mike and I were content to wash off the salt under a bilge pump shower then review our day over a meal of fresh fish and cold drinks.

Lately crocodiles seem to be the flavour of the month with TV programs and movies depicting crocs attacking animals and humans with apparent blind ferocity. As is always the case, the truth about these magnificent predators is far more complex and compelling than such a simplistic view. That said, I strongly advise divers do not seek out crocodiles as a dive experience, do not attempt to dive with them, do not enter or remain in the water with a crocodile in the vicinity – and always treat them with the caution and respect they deserve.

Crocodylus porosus

Being reptiles, crocodiles are 'cold blooded' – they need the sun and surrounding environment to moderate their body temperature. That's why they're often seen resting on river banks or beaches as they use the sun's radiant energy to raise their core body temperature. Like turtles, their sex at birth is determined by the incubation temperature of the nest, particularly in the first half of the incubation.

A variation of half a degree or more above the 'ideal' temperature of 31 degrees Celsius produces mostly males; a nest with a temperature below 31 degrees Celsius produces mostly females. Unlike turtles they don't dig a nesting pit in sand; they create a shallow nest on land in which a number of soft shelled ovoid eggs are laid. A large mound of plant matter is then raked over the eggs; the rotting vegetation provides heat from the chemical reactions. A female may add or subtract debris depending on the nest temperature. Some croc species do dig pits, but here we're covering a simplified natural history of *Crocodylus porosus*.

The eggs mature in 60-90 days. When ready to hatch, the young use a small sharp protrusion on their snout to break out of their shells. At this time they emit a croaking call which summons the mother and she helps free them from the mound. Unlike other reptile species such as turtles, female salt water crocodiles initially care for and protect their young, taking them gently in their mouth, transporting them to the nearest body of water and guarding them with maternal ferocity and courage. Initially the newborn feed on insects, frogs and small fish. If successful in the battle of life they graduate to larger prey such as fish, birds, other reptiles and mammals. And that's where we enter the food chain.

